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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,370	09/19/2005	Elias Jonsson	P16694US2	2983
27045                      7590                      08/26/2008				
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR 1-C-11 PLANO, TX 75024				
EXAMINER				
TORRES, JUAN A				
ART UNIT		PAPER NUMBER		
2611				
MAIL DATE		DELIVERY MODE		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/530,370

**Applicant(s)**

JONSSON, ELIAS

**Examiner**

JUAN A. TORRES

**Art Unit**

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 September 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-15 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 19 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SF-08)  
Paper No(s)/Mail Date 04/05/2005  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 04/05/2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Drawings***

The drawings are objected to because: Figures 1A, 1B and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated (see specification page 2 line 9 to page 3 line 8). See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The title has been changed to "Method and device for estimating a signal to interference ratio (SIR) in Wideband Code Division Multiple Access (WCDMA) systems"

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4-8, and 11-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Itoh (US 20030100267 A1).

Regarding claims 1, 8 and 15, Itoh discloses verifying a transmitted Transmit Power Control (TPC) command (figure 14 block 84, paragraphs [0229]-[0230] and [0256]-[0057], [0271], [0379]-[0381]), and giving a SIR estimation depending on the result of said TPC verification (figure 14 block 85, paragraphs [0229]-[0231] and [0245]-[0261], [0297]-[0302]).

Regarding claims 4 and 11, Itoh discloses claims 1 and 8, Itoh also discloses that that interference is estimated from said pilot symbols (paragraphs [0192], [0211]).

Regarding claims 5 and 12, Itoh discloses claims 4 and 11, Itoh also discloses that the estimated interference is filtered (figure 14 block 86, averaging paragraphs [0280], [0296], [0300]-[0306], [0323]-[0324]. See Applicant also specification page 2 lines 23-25).

Regarding claims 6 and 13, Itoh discloses claims 1 and 8, Itoh also discloses that the first unit is a base station and the second unit is a mobile unit (abstract).

Regarding claims 7 and 14, Itoh discloses claims 1 and 8, Itoh also discloses that the first unit is a mobile unit and the second unit is a base station (abstract)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3, and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh as applied to claims 1 and 8 above, and further in view of Dabak (US 6804311 B1).

Regarding claims 2 and 9, Itoh discloses claims 1 and 8. Itoh doesn't disclose weighing said pilot and data symbols. Dabak discloses weighing said pilot and data symbols (figures 1-4 weighting coefficients column 2 line 5 to column 4 line 48). Itoh and Dabak are analogous art because they are from the same field of endeavor of CDMA. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate in the system disclosed by Itoh the weighting disclosed by Dabak. The suggestion/motivation for doing so would have been to improve the performance (Dabak column 1 line 62-64).

Regarding claims 3 and 10, Itoh discloses claims 1 and 8. Itoh doesn't disclose encoding said data symbols using space-time transit diversity (STTD). Dabak discloses encoding said data symbols using space-time transit diversity (STTD) (figures 1-4 weighting coefficients column 2 line 5 to column 4 line 48). Itoh and Dabak are

analogous art because they are from the same field of endeavor of CDMA. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate in the system disclosed by Itoh the STTD encoding disclosed by Dabak. The suggestion/motivation for doing so would have been to improve the performance (Dabak column 1 line 62-64).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

a) Fukumoto ("Field experiments on closed loop mode transmit diversity in WCDMA forward link", NTT DoCoMo Inc., Kanagawa, this paper appears in: 2000 IEEE Sixth International Symposium on Spread Spectrum Techniques and Applications, Publication Date: 2000 Volume: 2, page(s): 433-438 vol.2).

b) Chen Chaoyang ("Optimum TPC command sequence in WCDMA" 2001 International Conferences on Info-tech and Info-net, 2001, Proceedings, ICII 2001 - Beijing. Volume 2, 29 Oct.-1 Nov. 2001 Page(s):134 - 138 vol.2).

c) Grandell ("Closed-loop power control algorithms in soft handover for WCDMA systems", IEEE International Conference on Communications, 2001. ICC 2001. Volume 3, 11-14 June 2001 Page(s):791 - 795 vol.3).

d) Young-Shin Yoon ("Adaptive SIR estimation in WCDMA systems", IEEE 55<sup>th</sup> Vehicular Technology Conference, 2002, VTC Spring 2002. Volume 1, 6-9 May 2002 Page(s):275 - 279 vol.1).

e) Bruckert(US 5812542 A) discloses determining weighting coefficients in a CDMA radio receiver

f) Dobrica (US 6070086 A) discloses closed loop power transmitter power control unit for a CDMA cellular system.

g) Bune (US 6760320 B1) discloses channel adaptive fast power control in CDMA

h) Kaipainen (US 20040160921 A1) discloses a data transmission method and equipment

i) Seki (US 20040233871 A1) discloses feedback control in closed-loop transmit diversity.

j) Seki(US 20040248581 A1) discloses mobile communication system and communication method for mobile communication system.

k) Zhang (US 7096034 B2) discloses reducing power consumption for wireless communications by mobile devices.

l) Dabak (US 6728302 B1) discloses STTD encoding for PCCPCH.

m) Jeske (US 7184497 B2) discloses estimating a signal-to-interference+noise ratio (SINR).

n) Wu (US 6426971 B1) discloses accurately predicting signal to interference and noise ratio to improve communications system performance.

o) Sipila (US 6816717 B1) discloses estimation of signal to interference ratio in a mobile communication system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUAN A. TORRES whose telephone number is (571)272-3119. The examiner can normally be reached on 8-6 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Juan Alberto Torres  
07/24/2008

/Juan A Torres/  
Examiner, Art Unit 2611